Adrian McCallum

[AEGC 2023]

1. Do you want to share some interesting stories behind what you will present in AEGC 2023?

I'm still deliberating on how I can best add value for the audience at AEGC 2023, but I expect that I'll tell a few tales of my remote-area geophysical research, pose some forthcoming problems and seek perspectives on collaborative ways to address those problems…

2. Is this your first in-person conference since covid? What are your expectations for this conference?

I was fortunate to attend a Cone Penetration Testing (CPT) conference in Bologna, Italy last year, so I'm very pleased to be back conferencing, face to face. I'm looking forward to meeting and engaging with new people, and learning of some techniques and contacts that may be able to assist me in my future expeditionary work.

[General questions]

3. For how long have you been a geoscientist/geophysicist? What do you enjoy most about being a geophysicist?

I've only been a 'real' geoscientist since I completed my PhD at the Scott Polar Research Institute in 2012, but I've been playing with radars since the mid 90s, in my time as a RAAF Navigator / RAN helicopter Observer. What I enjoy most (perhaps like many) is being in the field…

4. What is a challenge you have overcome and how did you do so?

Great question. One challenge that I'm still grappling with, is the transition from Defence to academia. I've been out of Defence for 15 years now, but old habits die hard; they're two very different worlds and cultures, and there are many things that continue to frustrate me. But, I'm learning, slowly…

5. What is your most memorable field trip experience? (e.g., best field meal? Your best sunrise/sunset location? Funniest or worst field memory?).

My most memorable field trip (generally) was a two-month ski expedition from the North Pole to Greenland, doing science. It was a great trip; I'll touch upon this at the conference. Another experience was a breakfast of vodka and herring with Polish collaborators at 0400 one morning in Svalbard, after a night of GPR, a breakfast that I haven't replicated since…

6. Do you have any presentation tips? This may help our presenters at AEGC 2023

Another great question; if only! An old RAAF mate posts regularly on Linked-In, and he would say practice, practice, practice (amongst other tips; see: https://www.linkedin.com/in/chrishuet/). But, I know my material pretty well, so as long as I know the gist of what I want to get across, I tend to keep it light-hearted and conversational; we'll see how we go…

7. What is a challenge that you recognise the geoscience community faces today, and how do you see us overcoming it??

Mmm, I would say development and retention of expertise. I'm no expert, but with geoscience schools/faculties etc. closing, at least in Australia, it would seem that we could be facing a personnel-crisis in years to come. How to overcome it? Salaries will only get you so far; in a post-Covid world, people want flexibility in their employment, so we need to enable this. This is a challenge that Defence, and particularly Navy, has been trying to address, for many years. Also, probably ensuring our technical literacy, so that we can most-efficiently utilise AI etc. into the future. This again is development and retention of technical expertise…

8. How can geoscience communities such as AIG, PESA, ASEG etc, better communicate how their fields can benefit the wider community?

Great question; I've seen more (expensive) televisions ads from mining companies recently, highlighting their sustainability, remediative-prowess etc. So, this may be a mechanism. But it more broadly begs the question: how can any entity, whether a business, institution, political party etc. communicate most effectively with society… Perhaps keep up to date with contemporary social media platforms, TikTok
etc. (but what's next?) to get most bang for your buck; or politically, court media personnel/organisations to maximise the potential for positive and more-regular exposure, across all media; this would require a bit of strategic thinking, to fund, implement etc.…

9. Given the opportunity to receive extra mentoring, would you choose to be mentored in your chosen career, technical science or how to communicate the benefits of exploration geoscience to wider community?

The opportunity to be mentored across all of those aspects would be valuable. To my students, I generally suggest that communication is key; it may open doors that other technical skills may not. So if I was doing the mentoring, I would be stressing communication and associated skills…

10. Do you think AI will take over your job or will the human element remain vital to exploration successes?

I confess that I'm not keeping up with AI data interpretation etc., so I think there is great potential for change, particularly in data processing/analysis. But, whilst I love the idea of autonomous GPR-drones doing run-of-the-mill surveying, I think there'll still be a need for the human element, particularly in challenging and remote environments; or, perhaps this is where we should most seek to effectively use automation etc.? I think that the human element will remain essential in a supervisory-capacity

(perhaps remotely), in both monitoring surveys and quality-checking data and analyses…